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ABSTRACT

Simple measures of reading, spelling, and written expression were administered to 566 elementary students from the states of Minnesota, Pennsylvania, and Washington. Each child was individually administered three reading word lists, three reading passages, two dictated spelling lists, and two story starters. Approximately 25 minutes was needed for testing, which was performed in the fall and spring. Measures of correctness appropriately reflected developmental changes from grade to grade and from fall to spring within grades. Differences in mean levels of performance were obtained for students from different states, indicating that state or school district norms may be more appropriate that national norms when using the measures for decision making. (Author/PN)

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THE USE OF STANDARD TASKS TO MEASURE ACHIEVEMENT IN READING, SPELLING, AND WRITTEN EXPRESSION: A NORMATIVE AND DEVELOPMENTAL STUDY

Stanley Deno, Douglas Marston, Phyllis Mirkin, Lisa Lowry,
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Abstract

Simple measures of reading, spelling, and written expression were administered to 566 elementary students from three states. Measures of correctness appropriately reflected developmental changes from grade to grade and from fall to spring within grades. Differences in mean levels of performance were obtained for students from different states, indicating that state or school district norms may be more appropriate that national norms when using the measures for decision making. Implications of the results for the use of simple measures in the classroom are discussed.

The Use of Standard Tasks to Measure Achievement in Reading, Spelling, and Written Expression: A Normative and Developmental Study

Epstein (1980) argued for the importance of aggregation in psychological research as a means of establishing the stability and generality of findings. Aggregation over occasions, one of four facets of aggregation that Epstein described, involves repeated assessments of a single behavioral item, thereby cancelling out the incidental effects associated with each particular assessment. Aggregation over occasions increases both the temporal reliability or stability of findings and their generality over occasions. In the measurement of academic performance, the concept of aggregation over occasions implies repeated assessments of well-defined academic skills. Repeated assessments of defined skills contrast with typical measurement practice--the administration of an achievement test battery at the beginning and end of the school year. The former generates data that are stable and generalizable because the data are aggregated across occasions; the stability and generality of the latter derive from aggregation across stimuli. In recent years, instructional methodologies have been developed that capitalize on the stability and generality inherent in repeated assessments of academic skills (Deno & Mirkin, 1977; White & Haring, 1980).

These instructional methodologies may be conceptualized as systems for making decisions about the effectiveness of teaching strategies. The systems involve an operational statement of academic skills, frequent if not daily performance samples, goal setting, and decision making based upon comparisons of a child's performance to the

progress necessary to achieve the goal. Clearly, reasonable and appropriate goals are prerequisite to valid decision making. Goals (or "aims" as they are known in Precision Teaching terminology) are determined by specifying a desired level of performance or progress and a date on which the goal is to be achieved. The research described in this paper is an effort to establish normative performance levels for elementary-age students on standard instructional tasks. In order to clarify the distinction between standard instructional tasks and grade level tasks, it is necessary to consider how goals have been established previously.

Sources of Aims and Goals

Traditionally, goals have been expressed in terms of a child's level of functioning in grade level material. Starlin (1979), for example, suggested that fourth, fifth, and sixth grade readers must read at 125 words per minute or better with two or fewer errors in order to make satisfactory progress in their subsequent grade. This criterion was based upon the performance of hundreds of children, and the effort required to substantiate this standard was remarkable. Nevertheless, there are two shortcomings with this grade level approach which weigh against its wholesale adoption and use. First, the assumption that the difficulty of a reading series increases uniformly as a function of grade level can be challenged on the basis of recent research (Fuchs, Fuchs, & Deno, 1981).

Second, by maintaining a standard criterion and allowing the difficulty of the material to change, the importance of improvement is minimized. When acceptable performance is defined as a standard

fluency and accuracy criterion, average readers at all grade levels would be functioning at approximately the same level of proficiency. The differences among average readers would lie in the difficulty of the material, not in different levels of performance. Average readers making adequate progress would rot be expected to change their level of performance; presumably, they would read at 125 words per minute in each increasingly difficult story in the text.

An alternative to setting goals in which task difficulty changes and performance is held constant is to hold task difficulty constant and specify increases in performance as the desired outcome. By using a standard task, differences in performance across and within grade levels are emphasized, rather than differences in task difficulty. Growth and changes in child performance become the criteria against which the effectiveness of teaching programs is measured.

Rationale for the Use of a Standard Task

In measuring changes in a child's physical stature, the same scale is used to determine weight and the same rule is used to determine height regardless of the child's age. As a result, development scales for height and weight are constructed readily. In assessing a child's reading development, teachers and psychologists rely upon measures with scales that differ from grade level to grade level. If we were to measure weight in the same way, we would need a different scale for each year of life; each scale would be calibrated so that average children at each age would weigh the same. Differences among children of various ages would be a function of the calibration of the scale in the same way that differences among

readers are a function of the difficulty of the material when the standard of proficiency at grade level is used.

If a standard task were used across the elementary grades, one obvious question is whether the task would discriminate among children at the extremes. For example, if difficulty were controlled at third grade level, the material might be so difficult for beginning readers that good and poor readers alike would read with the same low proficiency. At the opposite extreme, we might anticipate a problem with readers at the fifth and sixth grade levels. The standard task might fail to discriminate between good and poor readers at this level since good and poor readers alike will have mastered the material. Whether standard academic tasks will differentiate among children at widely varying levels of proficiency, however, is a question open to investigation.

Purpose of the Study

The first purpose of this study was to determine the feasibility of using a standard task to measure the reading, spelling, and writing proficiency of elementary children. The primary question was whether standard tasks could be identified that would discriminate among students in the six elementary grades, and whether those tasks would discriminate within grade levels at different times of the year. A second purpose of the study was to describe procedures for establishing local norms on the standard tasks. Presumably, if standard tasks could be identified, local districts would be able to establish norms so that children in need of special assistance could be readily screened and identified.

Method

In an effort to provide decision makers with information on how students perform on the standard tasks of reading (Deno, Mirkin, Chiang, & Lowry, 1980), spelling (Deno, Mirkin, Lowry, & Kuehnle, 1980), and written expression (Deno, Mirkin, & Marston, 1980), these measures were administered to a large sample of elementary students from three states: Minnesota, Pennsylvania, and Washington.

Standard Tasks

Reading. Reading materials developed by Deno, Mirkin, Chiang, & Lowry (1980) were used to collect information on the typical reading performance of elementary students. Each student read aloud from three isolated word lists and three oral reading passages.

The word lists measure consisted of three alternative lists of 140 words each that were randomly selected from the Core List of 5,167 words listed in Basic Elementary Reading Vocabulary (Harris & Jacobson, 1972). The words were chosen randomly from those at levels pre-primer to grade three that had a frequency index of more than 10 per million words in the Teachers' Handbook of 10,000 Words (Thorndike & Lorge, 1944).

The passages measure included three passages of about 300 words each. They were selected from the third grade book from three different basal reading series: Allyn-Bacon, Ginn 720, and Houghton-Mifflin. Each passage consisted of the first part of the story. The Fry Readability Index formula (Fry, 1968) was used to ensure that each passage was at the third grade level.

On both measures the examiner recorded the number of words

pronounced correctly and incorrectly. Subjects were given 60 seconds to read aloud from each stimulus material. For each subject two measures of correct reading and two measures of incorrect reading were computed: Mean Number of Words Read Correctly from Word Lists, Mean Number of Words Read Correctly from Passages, Mean Number of Words Read Incorrectly from Word Lists, and Mean Number of Words Read Incorrectly from Passages.

Spelling. The measurement of spelling performance in this study focused on two dictated spelling lists developed by Deno, Mirkin, Lowry, and Kuehnle (1980). Both lists were composed of randomly selected words from levels preprimer to grade three from Basic Elementary Reading Vocabularies (Harris & Jacobson, 1972).

The examiners dictated words for three minutes for each list while the subject wrote his or her responses. A maximum of 15 seconds was allowed for each word before the next word was presented. The spelling lists were scored for the number of correct letter sequences (see White & Haring, 1976) and the number of words spelled correctly and incorrectly. For each subject the mean on each measure was computed.

Written Expression. The format developed by Deno, Mirkin, and Marston (1980) in the formative evaluation of written expression was adopted for this study. Each student was presented two Story Starters and given three minutes for each to write a composition. Each student's composition was then scored for the Mean Number of Total Words Written, Mean Number of Words Spelled Correctly, Mean Number of Words Spelled Incorrectly, and Mean Number of Letters Written in

Correct Sequence.

Subjects

A sample of 566 students enrolled in grades one to six from Minnesota, Pennsylvania, and Washington was administered the measures of reading, spelling, and written expression. All students were selected randomly within the school districts that volunteered to participate in the study. There were 275 males and 291 females in the total sample. Of the 566 students tested, there were 92 first graders, 85 second graders, 96 third graders, 99 fourth graders, 101 and 93 sixth graders.

The Minnesota sample consisted of 134 of the 566 students, 63 boys and 71 girls. Most of these subjects (73%) were selected from two urban areas with populations of 50,000 and 100,000 people. These elementary students were approximately equally distributed among grades 1 to 6.

The Pennsylvania sample of students included 157 boys and 169 girls, equally distributed across the six grade levels. These elementary students were randomly selected from two areas (rural and urban) in Central Pennsylvania. The remaining 106 elementary students tested were from the Seattle, Washington area; 55 were male and 51 were female. Again, the students were distributed approximately equally through grades 1 to 6.

Procedure

Each child was administered the reading, spelling, and written expression measures during the fall and the spring on an individual basis by an examiner trained in the administration of the measures.

Testing lasted no longer than 25 minutes.

The order of presentation of the materials was as follows:

1. Three Reading Word Lists (1 minute each)
2. Three Reading Passages (1 minute each)
3. Two Dictated Spelling Lists (3 minutes each)
4. Two Story Starters (3 minutes each)

Results

All data gathered on the 566 students were scored by four psychometric assistants. Interscorer reliabilities for the reading, spelling, and written expression measures ranged from .96 to .99

Grade Level Differences

The mean scores on the four measures of reading performance for the fall and spring administrations are presented by grade level in Table 1. The mean scores on the three spelling measures are presented in the same way in Table 2 and the mean scores on the four writing measures are presented in Table 3.

Insert Tables 1-3 about here

For the seven measures of correctness and fluency, an increase in mean performance was observed as a function of grade level, for both the fall and spring administrations. With minor exceptions, for the measures of incorrect responding, there was a decrease in mean number of errors with increasing grade level. The most frequent exceptions to this occurred for Words Spelled Incorrectly in written expression.

To test the hypothesis that performance would vary with grade, a

simple one-way analysis of variance was conducted for each simple measure, with grade level as the independent variable. Separate analyses were conducted for the fall and spring means. To check further the assumptions that the fluency and correct measures would increase and that the error measures would decrease with grade level, each measure was subjected to a test of linearity for the entire sample. Altogether, 22 ANOVAs and 22 tests of linearity were conducted: one for each of the 11 measures for both fall and spring.

With regard to the main effects for grade, 21 of the 22 F values were significant at or below the .001 level of significance. The tests of linearity also suggested strong linear trends, with 20 of 22 *F* values significant at or below the .05 level. Twelve of these *F* values were significant at or below the .001 level. Follow-up tests of the grade level main effects were conducted using the Tukey procedure; the results of these follow-ups are reported in Table 4 using Duncan's (1955) underlining procedure.

Insert Table 4 about here

In order to establish a set of norms for each of the direct measures, levels of performance were calculated for the 25th, 50th, and 75th percentiles for each measure for both fall and spring. These data are presented in Figures 1-14.

Insert Figures 1-14 about here

Annual Growth

The extent to which students improved between the fall and spring administrations on the reading, spelling, and written expression measures was analyzed by conducting paired *t* tests at every grade level. The average difference scores (spring minus fall) for the seven measures of correct performance and their levels of significance are reported in Table 5; the difference scores for the four measures of incorrect performance and their levels of significance are reported in Table 6. For the measures of correct performance, 41 of 42 *t* values were statistically significant at or below the .05 level of probability, while 37 of these values were significant at or below the .001 level. For the error measures, 11 of 24 *t* values were significant in the hypothesized direction at or below the .05 level of probability. Nine of these 11 significant differences were obtained on the reading measures.

Insert Tables 5 and 6 about here

In general, greater growth was found for the reading and spelling measures. Mean differences from fall to spring in correct performance on the reading word lists ranged from 9.2 words at fifth grade to 15.5 at second grade. On the oral reading passage, the differences ranged from 11.5 words for the sixth graders to 25.1 words at first grade. The fall to spring increase in the number of words spelled correctly ranged from 4.2 words at fifth grade and 4.3 words at first grade to 5.7 words at second and third grades, while the growth in the number

of letters ranged from 28.6 letters at first grade to 37.7 letters at second grade. On the total words written measure of written expression, the differences ranged from 1.7 words at sixth grade to 8.9 words at second grade. For words written correctly, the range was from 3.7 (sixth grade) to 8.0 (second grade); for correct letter sequences written, the range was from 17.6 (second grade) to 34.4 (first grade).

In general, the mean number of errors on the four measures declined between fall and spring at each grade level, although a smaller proportion of these differences was statistically significant than was the case for the correct measures. In fact, words written incorrectly proved to be insensitive to fall to spring differences at four grades when used as a measure of spelling and at all six grades when used as a measure of written expression.

Stability over Time

The data presented in the preceding two sections showed significant differences in mean performance for all 11 measures across grade levels and for nine measures within grade levels from fall to spring. These data suggest that the simple and direct measures are sensitive to growth. Another issue is stability over time; it is possible that the performances of only a few individuals accounted for the mean differences on the direct measures. To address this issue, stability coefficients were computed by correlating individual performance in the fall and the spring. Significant differences between test sessions and moderate to high stability coefficients would indicate that most students improved within the school year.

Stability coefficients are presented in Table 7. A definite pattern emerges in the correct and error measures: The measures of correctness produced coefficients that were greater than those produced by the error measures. In addition, the measures of correct performance in reading proved to be the most stable; these coefficients ranged from .58 at first grade to .94 at fifth grade on the word list measure. For spelling, the coefficients for the measures of correct performance ranged from .21 at first grade to .8[illegible] at second grade on the words spelled correctly measure. Stability for the measures of written expression was somewhat lower; the coefficients ranged from .20 at first grade to .78 at sixth grade on the words written correctly measure.

Insert Table 7 about here

With respect to grade level, the stability coefficients were fairly stable for all grades except first grade. The median stability coefficients of the seven correct measures for grades 1 to 6 were .41, .77, .68, .77, .64, and .78.

State, Demographic, and Sex Differences

Separate analyses were conducted to determine the extent to which the variance was affected by state, rural or urban setting of the sample, and the sex of the children. Of the 22 analyses conducted with state as the independent variable, 12 main effects were significant at the .05 level or below. The significant effects were obtained on measures of correct performance in reading, spelling, and

written expression. Differences were more common in the fall analyses than the spring analyses, and most favored the Minnesota sample over the Washington and Pennsylvania samples.

Of the 22 analyses of urban, small urban, and rural differences, only four main effects proved significant at the .05 level or below. All of these differences occurred at the fall administration and three were obtained on correct measures of written expression. In general, the urban samples scored lower on these measures than either the small urban or rural samples. Interestingly, state accounted for a greater proportion of the variance in most of the measures than the urban-rural variable.

With regard to sex of the student, 12 of the 22 analyses yielded significant main effects at the .05 level or below. These significant differences appeared on measures of correct performance in readng, spelling, and written expression, for both fall and spring administrations. In all of these differences, the girls in the total sample outperformed the boys. The differences in the two spelling measures (words spelled correctly and letters spelled correctly) and the three measures of written expression (total words written, words written correctly, and letters written correctly) are predictable given the apparent interrelatedness of the measures.

Discussion

The results of the present study provide ample evidence in support of the hypothesis that standard tasks at constant levels of difficulty can be used to measure developmental changes in student performance. In fact, there was a remarkable regularity in all

measures of correct performance in reading, spelling, and writing--from grade to grade; from fall to spring within grades; and, in every instance, from spring to fall across adjacent grades.

There was less regularity in the measures of incorrect performance. For example, in the fall at several grade levels, the children made more errors than would be predicted by the spring term error rates of the children in the next lower grade. This same pattern held true but to a lesser extent in spelling. A more interesting anomoly in the incorrect spelling measure was an increase in errors from grade 1 to grade 2. This increase may be explained as an increase in the proficiency of the children at the tool skill of writing words. Although total errors increased, the percent of words that the children spelled correctly increased steadily from the grade 1 fall administration to the grade 2 spring administration. This same pattern held in the measures of incorrect performance in written expression, and probably represents a valid developmental effect.

The analyses summarized in Table 4 also illustrate that the measures of correct performance in reading, spelling, and written expression discriminated more clearly between grade levels than the measures of incorrect performance. In reading, incorrect performance on both the word lists and the passages was not differentiated by grade above grade 2; in spelling and written expression, the measures of incorrect performance failed to discriminate at any grade level. Both of these relationships held for both fall and spring administrations. It is interesting to note that when the measures of correct performance failed to discriminate between adjacent grades,

grades 3, 4, and 5 almost always were involved. Since the grade 6 performances were separated from the lower grades on all but the spring administration of Total Words Written and Words Spelled Correctly, this lack of discriminability among grades 3, 4, and 5 cannot be explained as a ceiling effect.

In reading, performance on the word lists was as discriminating as performance on the passages, even though the latter enjoys greater credibility and face validity among teachers. Given that word lists are easier to construct and that by randomizing the order in which the words are presented, equivalent forms of the same list can be made, it would seem that lists might be preferred to passages. In spelling, both words correct and letter sequences correct proved equally discriminating. Given the relative ease of scoring correct words, the former measure would seem to be the measure of choice. However, in written expression, the outcome was somewhat different. The finer the unit of analysis, the better its discriminability. Thus, whereas the Total Words Written measure failed to discriminate between grades 3 and 4 in the fall, and grades 3 and 4 and grades 5 and 6 in the spring, the Words Spelled Correctly measure failed only to discriminate between grades 3 and 4 and grades 5 and 6 in the spring. Correctly Written Letter Sequences, on the other hand, discriminated between all adjacent grades for both the fall and spring administrations.

When coupled with the results of earlier research on the criterion validity of the tasks used in this study (Deno, Mirkin, Chiang, & Lowry, 1980; Deno, Mirkin, Lowry, & Kuehnle, 1980; Deno,

Mirkin, & Marston, 1980), the evidence that regular measurement of performance on standard tasks can be used to provide "vital signs" of educational growth is persuasive. Measuring performance on a standard task of constant difficulty facilitates comparisons that are not possible when different tasks of different difficulty are used to measure performance. For example, increases in reading, spelling, and writing proficiency are represented by increases in actual behavior counts rather than by relative standing within the peer group. And, since students from different grades or at different ages are all measured on the same task, comparisons in growth within and between individuals across time easily can be made on the same behavioral scale. It is clear that given the same amount of time and the same text passages, students who read more words correctly are more proficient readers. This statement is true regardless of whether the difference is between the scores of students at different ages or between scores for the same student at different ages. The same general conclusions hold for the standard tasks used in spelling and written expression.

The conclusions are likely to be true only in general, however. We are sure to find students whose scores are the same but who function differently when measured on related tasks, or students whose scores are different but who function the same on related tasks. In the face of such qualifications that are required of virtually all research on human behavior, the conclusion that "production" or "correct output in fixed time" is a critical indicator of academic growth seems inescapable.

Turning to a second issue, the simplicity and economy of the standard tasks used in the research makes them ideal for routine use in the classroom. Teachers easily can obtain the behavior samples on a weekly basis as an integral part of their instruction. Doing so would permit, as Epstein (1980) argues, aggregation of data for purposes of establishing stability. Aggregation of repeated measurements surely will make possible reliable decisions about individuals that we cannot now make with scores from a single administration of a standard test. Further, with the potential of repeated measurement over time it becomes possible to make program evaluation decisions based on time series data that are not possible when pre and posttesting are used (Campbell, 1969).

Finally, the data from the present research point to the possibility that typical growth rates on the standard tasks could be established and used to place the growth of individual students in a normative perspective. The growth curves obtained are quite smooth, and the distributions within grade levels have the technical characteristics required for making within-grade discriminations. The measurement scale is sufficiently refined to permit reliable discriminations from fall to spring and growth in that period is linear. Finally, while establishing national norms on standard tasks is possible, the differences obtained among states leads us to recommend that states and local school districts develop their own norms as a basis for decision making.

References

Campbell, D. T. Reform as experiments. American Psychologist, 1969, 24, 409-429.

Deno, S. L., Mirkin, P. K., Chiang, B., & Lowry, L. Relationships among simple measures of reading and performance on standardized achievement tests (Research Report No. 20). Minneapolis: University of Minnesota, Institute for Research on Learning Disabilities, 1980.

Deno, S. L., Mirkin, P. K. Lowry, L., & Kuehnle, K. Relationships among simple measures of spelling and performance on standardized achievement tests (Research Report No. 21). Minneapolis: University of Minnesota, Institute for Research on Learning Disabilities, 1980.

Deno, S. L., Mirkin, P. K., & Marston, D. Relationships among simple measures of written expression and performance on standardized achievement tests (Research Report No. 22). Minneapolis: University of Minnesota, Institute for Research on Learning Disabilities, 1980.

Deno, S. L., & Mirkin, P. K. Data-based program modification: A manual. Reston, Virg.: Council for Exceptional Children, 1977.

Duncan, D. B. Multiple range and multiple F tests. Biometrics, 1955, 11, 1-42.

Epstein, S. The stability of behavior: II. Implications for psychological research. American Psychologist, 1980, 35(9), 790-806.

Fry, E. Graph for estimating reliability. Journal of Reading, 1968, 577.

Fuchs, L., Fuchs, D., & Deno, S. Reliability and validity of curriculum-based informal reading inventories (Research Report No. 59). Minneapolis: University of Minnesota, Institute for Research on Learning Disabilities, 1981.

Harris, A. P., & Jacobson, M. D. Basic elementary reading vocabularies. New York: MacMillan, 1972.

Starlin, C. Evaluating and teaching reading to "irregular" kids. Iowa Perspective, Iowa Department of Public Instruction, Dec 1979, 1-11.

Thorndike, E. L., & Lorge, I. The teacher's word book of 30,000 words. New York: Teachers College, Columbia University, 1944.

White, O. R., & Haring, N. G. Exceptional teaching: A multimedia training package. Columbus, Ohio: Charles E. Merrill, 1976.

White, O. R., & Haring, N. G. Exceptional teaching (2nd ed.). Columbus, Ohio: Charles E. Merrill, 1980.

Table 1

Mean Correct and Incorrect Performance on Two Reading Tasks by Grade Level at Fall and Spring

	Word Lists				Passages			
	Words Correct		Words Incorrect		Words Correct		Words Incorrect	
Grade	Fall	Spr	Fall	Spr	Fall	Spr	Fall	Spr
1	3.75	17.32	18.21	12.34	11.31	36.42	23.69	8.94
2	25.50	41.02	12.72	9.56	57.22	81.90	9.88	6.04
3	49.90	63.02	6.03	4.64	98.92	119.18	4.81	3.95
4	61.32	71.57	4.73	3.51	113.93	127.57	4.05	3.14
5	68.63	77.76	4.34	3.31	128.76	142.25	3.83	3.53
6	83.53	90.71	3.80	2.87	147.17	158.65	4.23	3.05

Table 2

Mean Correct and Incorrect Performance on the Spelling Task by Grade Level at Fall and Spring

Grade	Correct Words		Incorrect Words		Correct Letter Sequences	
	Fall	Spr	Fall	Spr	Fall	Spr
1	1.53	5.86	9.58	9.54	17.70	46.31
2	6.35	12.01	10.85	10.12	60.88	98.58
3	13.96	19.68	8.97	7.96	104.03	138.95
4	18.67	23.65	8.10	6.62	131.04	160.49
5	22.70	26.98	8.36	6.45	154.93	185.51
6	27.39	32.16	6.41	5.53	180.31	211.73

Table 3

Mean Correct and Incorrect Performance on the Writing Task by Grade Level at Fall and Spring

Grade	Total # Words		Correct Words		Incorrect Words		Correct Letter Sequences	
	Fall	Spr	Fall	Spr	Fall	Spr	Fall	Spr
1	7.84	15.64	5.01	11.59	3.58	4.84	22.52	55.25
2	19.67	28.52	15.62	23.64	4.12	5.00	73.43	107.83
3	32.02	37.04	28.98	34.19	3.25	3.06	132.51	151.49
4	37.53	41.38	34.84	38.96	2.98	2.71	159.68	178.85
5	43.98	49.22	41.18	46.87	3.29	2.74	189.53	214.52
6	52.09	53.72	47.38	51.08	5.87	3.30	220.38	240.02

Table 4

Differences Among Grade Level Means on All Tasks at Fall and Spring Using Duncan's Underlining Notation

Measure		Grade					
Reading							
Words Correct on Word Lists	Fall	1	2	3	4	5	6
	Spr	1	2	3	4	5	6
Words Incorrect on Word Lists	Fall	1	2	3	4	5	6
	Spr	1	2	3	4	5	6
Words Correct on Passages	Fall	1	2	3	4	5	6
	Spr	1	2	3	4	5	6
Words Incorrect on Passages	Fall[a]	1	2	3	6	4	5
	Spr[a]	1	2	3	5	4	6
Spelling							
Words Spelled Correctly	Fall	1	2	3	4	5	6
	Spr	1	2	3	4	5	6
Words Spelled Incorrectly	Fall[a]	2	1	3	5	4	6
	Spr[a]	2	1	3	4	5	6
Correct Letter Sequences	Fall	1	2	3	4	5	6
	Spr	1	2	3	4	5	6
Written Expression							
Total Words Written	Fall	1	2	3	4	5	6
	Spr	1	2	3	4	5	6
Words Spelled Correctly	Fall	1	2	3	4	5	6
	Spr	1	2	3	4	5	6
Words Spelled Incorrectly	Fall[a]	6	2	1	5	3	4
	Spr[a]	2	1	6	3	5	4
Correct Letter Sequences	Fall	1	2	3	4	5	6
	Spr	1	2	3	4	5	6

[a]Grades ranked from highest to lowest mean scores.

Table 5

Spring - Fall Difference Scores for Seven Measures of Correct Performance

Measure	Grade 1	2	3	4	5	6
Reading						
Word Lists	13.6***	15.5***	13.1***	10.2***	9.2***	7.2*
Passages	25.1***	24.7***	20.2***	13.6***	13.5***	11.5**
Spelling						
Words	4.3***	5.7***	5.7***	5.0***	4.2***	4.8***
Letter Sequences	28.6***	37.7***	34.9***	29.4***	30.6***	31.4***
Written Expression						
Total Words	7.8***	8.9***	5.0*	3.8***	5.3***	1.7
Words Correct	6.5***	8.0***	5.2**	4.1***	5.7***	3.7***
Letter Sequences	34.4***	17.6***	28.9***	19.2***	25.0***	19.7***

[a]Significance levels are denoted as follows:
*p=.05
**p=.01
***p=.001

Table 6

Spring - Fall Difference Scores for Four Measures of Incorrect Performance

Measure	Grade 1	2	3	4	5	6
Reading						
Word List Errors	-5.9***	-3.2**	-1.4***	-1.2*	-1.0***	-1.0*
Passages Errors	-14.8***	-3.8***	-1.1	-0.9***	-0.3	-1.2
Spelling						
Incorrect Words	-0.4	-0.7	-1.0	-1.5*	-1.9*	-0.9
Written Expression						
Incorrect Words	1.2**	-0.9	-0.2	-0.2	-0.5	-2.5

[a]Significance levels are denoted as follows:
*p=.05
**p=.01
***p=.001

Table 7

Stability Coefficients on Standard Tasks of Reading, Spelling, and Written Expression by Grade Level

Variable	Grade 1	2	3	4	5	6	Entire
Reading							
Words Correct--Word Lists	.58	.91	.92	.88	.94	.61	.89
Words Incorrect--Word Lists	.45	.56	.74	.58	.86	.68	.65
Words Correct--Passages	.67	.93	.91	.88	.87	.72	.92
Words Incorrect--Passages	.23	.49	.52	.61	.87	.18	.47
Spelling							
Words Correct	.21	.86	.85	.84	.84	.79	.91
Words Incorrect	.29	.66	.35	.26	.34	.35	.38
Correct Letter Sequences	.41	.77	.68	.77	.56	.78	.86
Writing							
Total Words	.47	.59	.27	.72	.55	.49	.70
Words Correct	.20	.68	.37	.74	.60	.78	.82
Words Incorrect	.43	.11	.16	.58	.37	.04	.07
Correct Letter Sequences	.36	.70	.64	.74	.64	.79	.86

Figure 1.

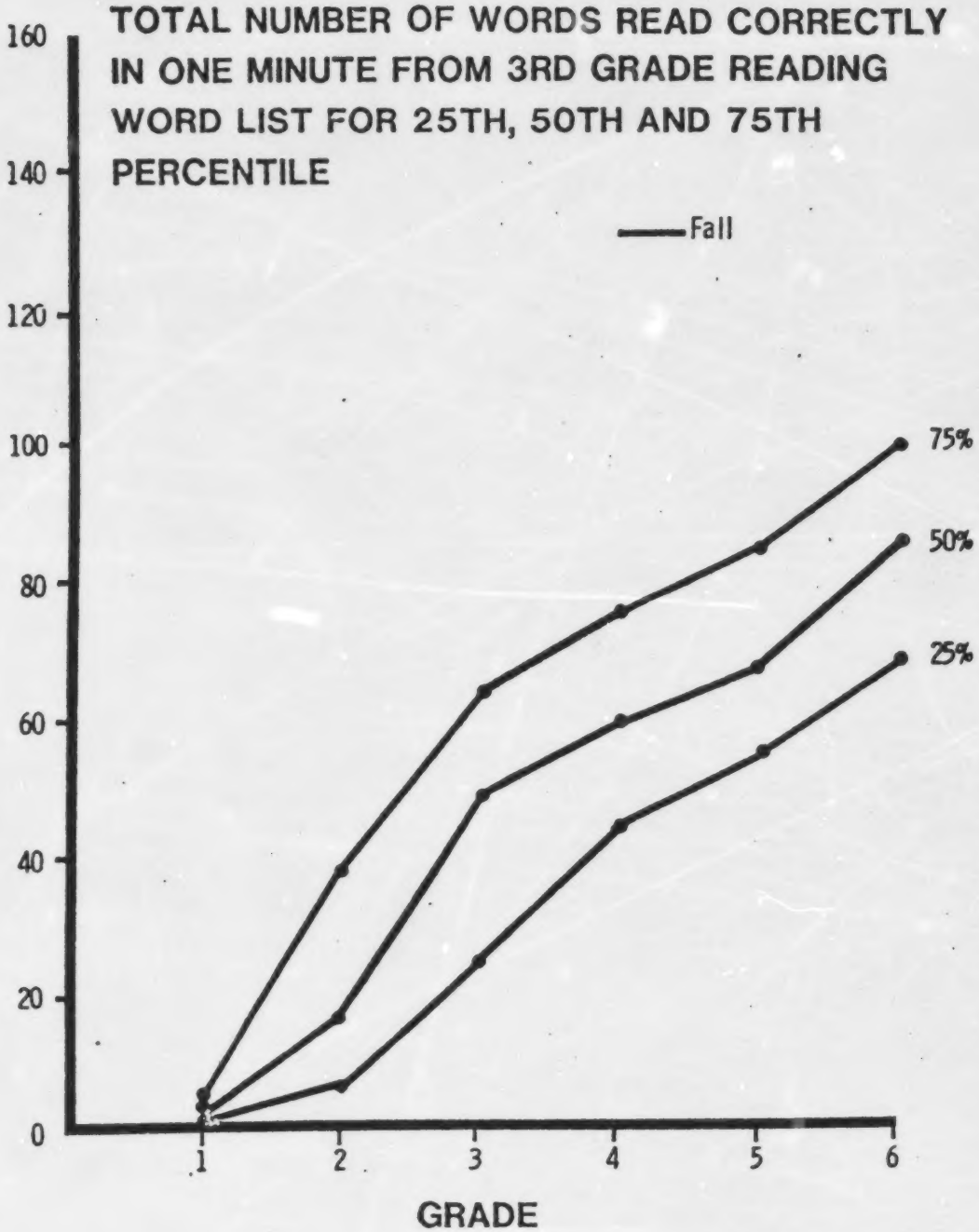

TOTAL NUMBER OF WORDS READ CORRECTLY IN ONE MINUTE FROM 3RD GRADE READING WORD LIST FOR 25TH, 50TH AND 75TH PERCENTILE
Fall
160
140
120
100
80
60
40
20
0
75%
50%
25%
1
2
3
4
5
6
GRADE

Figure 2.

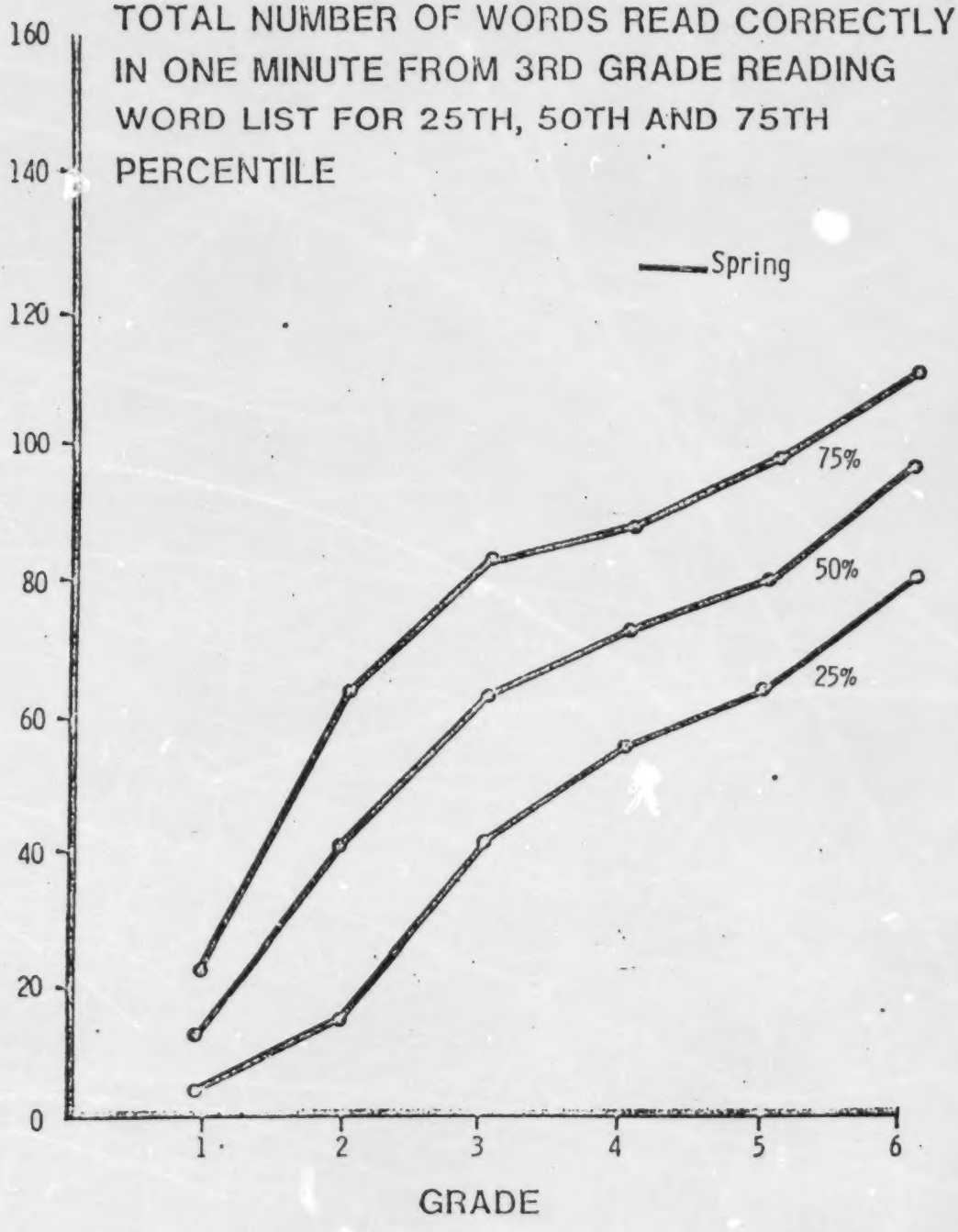

TOTAL NUMBER OF WORDS READ CORRECTLY IN ONE MINUTE FROM 3RD GRADE READING WORD LIST FOR 25TH, 50TH AND 75TH PERCENTILE
Spring
75%
50%
25%
160
140
120
100
80
60
40
20
0
1
2
3
4
5
6
GRADE

Figure 3.

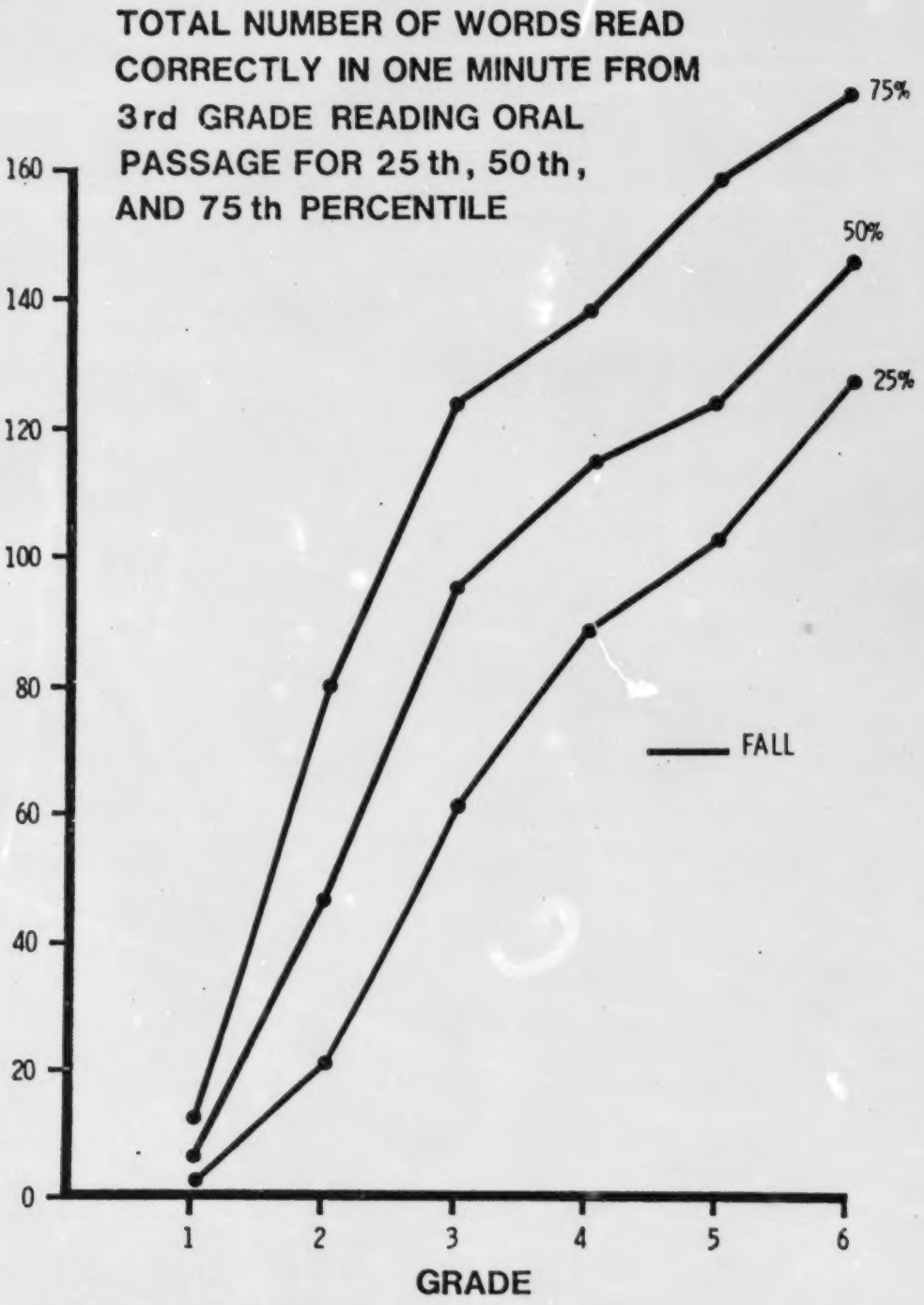

TOTAL NUMBER OF WORDS READ CORRECTLY IN ONE MINUTE FROM 3rd GRADE READING ORAL PASSAGE FOR 25 th, 50 th, AND 75 th PERCENTILE
75%
50%
25%
FALL
160
140
120
100
80
60
40
20
0
1
2
3
4
5
6
GRADE

Figure 4.

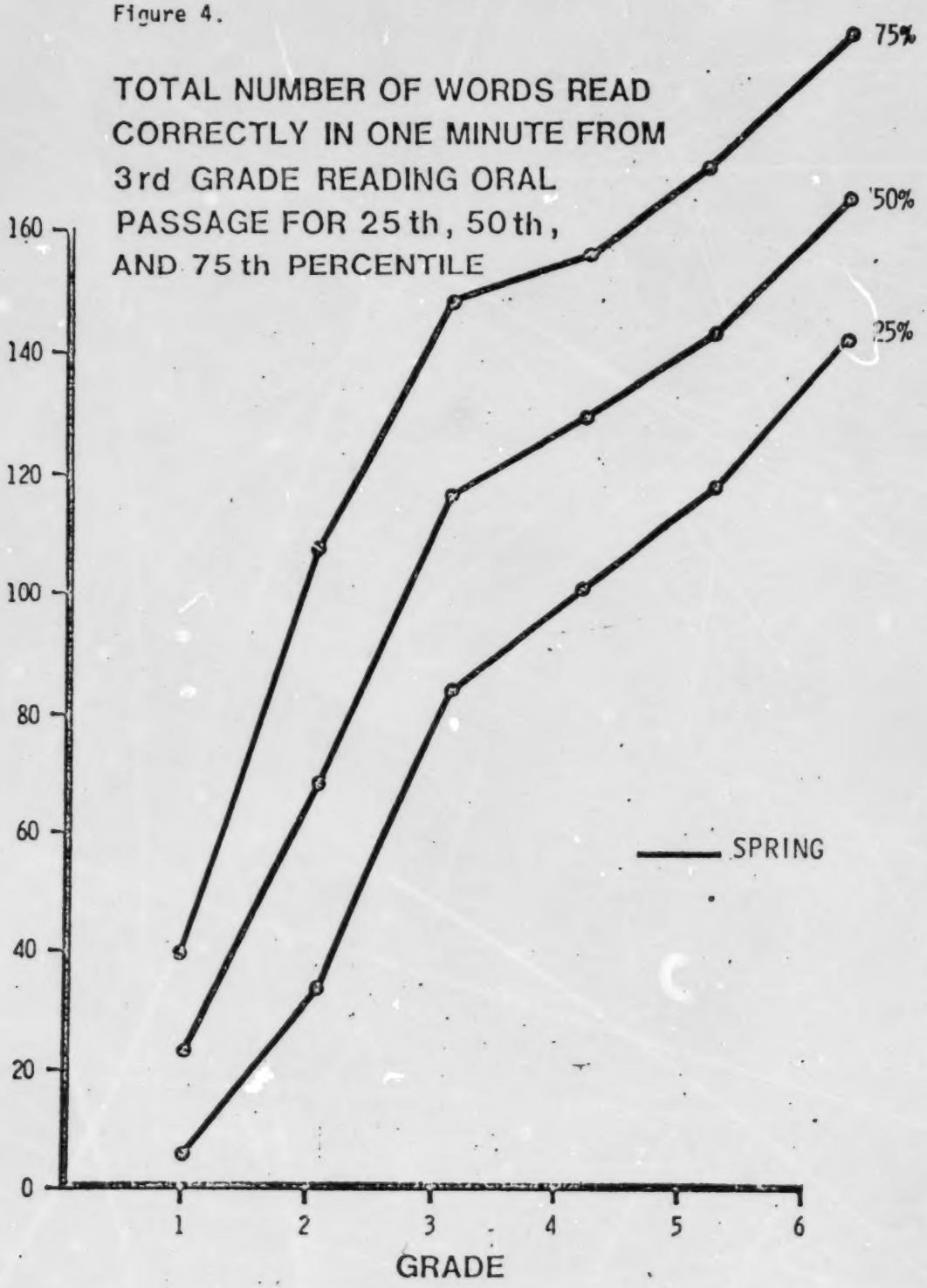

TOTAL NUMBER OF WORDS READ CORRECTLY IN ONE MINUTE FROM 3rd GRADE READING ORAL PASSAGE FOR 25th, 50th, AND 75th PERCENTILE
75%
50%
25%
160
140
120
100
80
60
40
20
0
SPRING
1
2
3
4
5
6
GRADE

Figure 5.

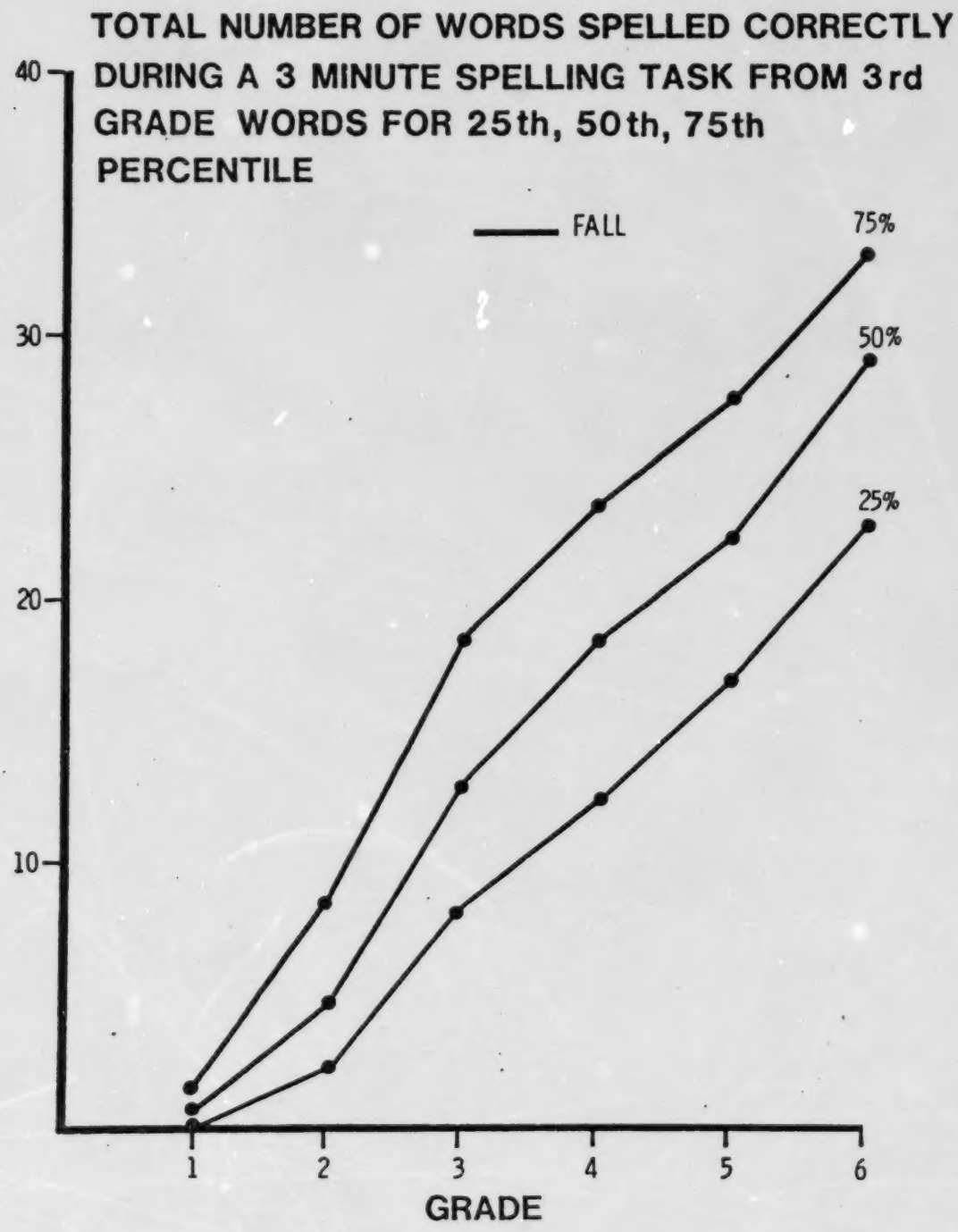

TOTAL NUMBER OF WORDS SPELLED CORRECTLY DURING A 3 MINUTE SPELLING TASK FROM 3rd GRADE WORDS FOR 25th, 50th, 75th PERCENTILE
FALL
75%
50%
25%
40
30
20
10
1
2
3
4
5
6
GRADE

Figure 6.

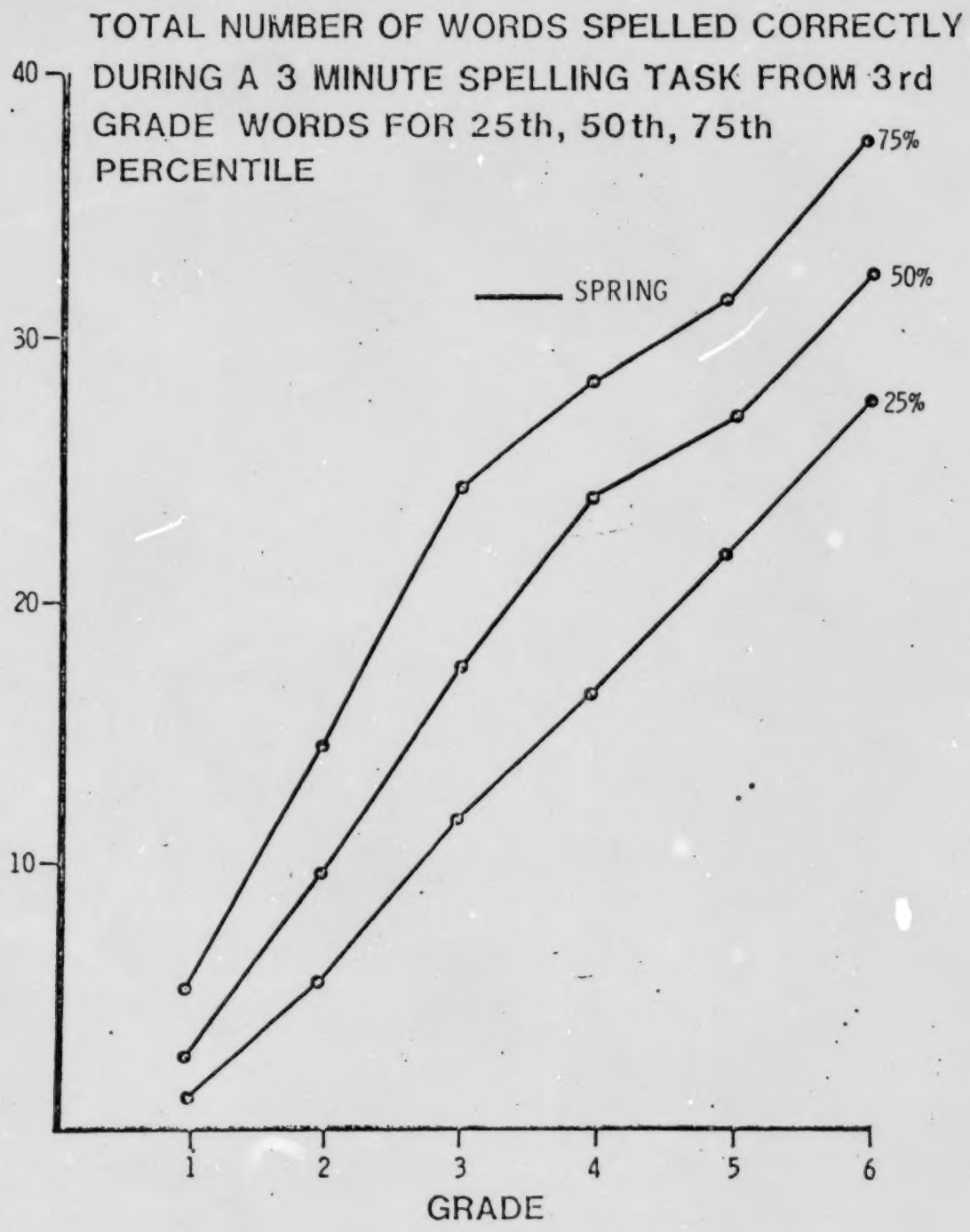

TOTAL NUMBER OF WORDS SPELLED CORRECTLY DURING A 3 MINUTE SPELLING TASK FROM 3rd GRADE WORDS FOR 25th, 50th, 75th PERCENTILE
40
30
20
10
SPRING
75%
50%
25%
1
2
3
4
5
6
GRADE

Figure 7.

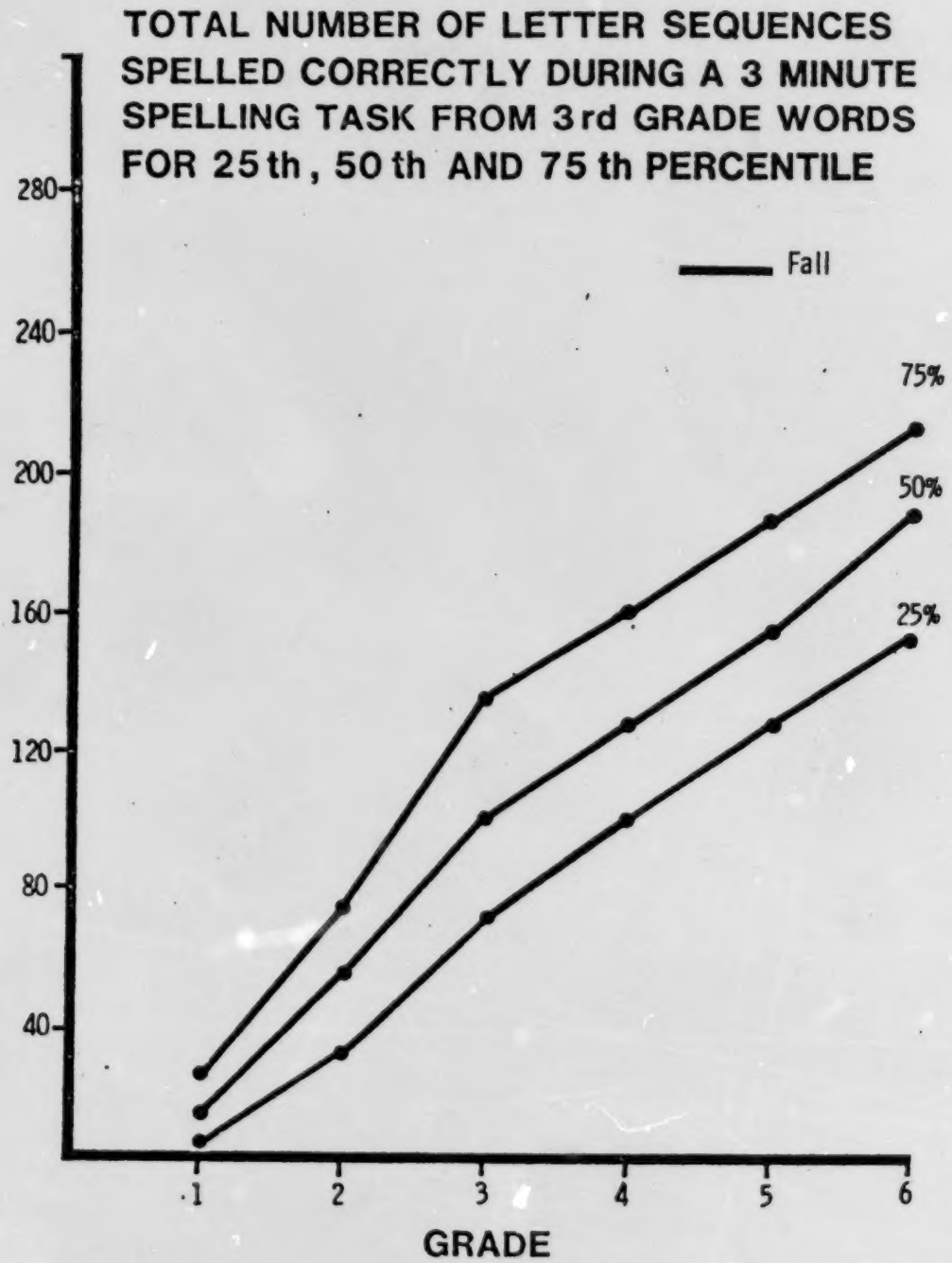

TOTAL NUMBER OF LETTER SEQUENCES SPELLED CORRECTLY DURING A 3 MINUTE SPELLING TASK FROM 3rd GRADE WORDS FOR 25th, 50th AND 75th PERCENTILE
Fall
75%
50%
25%
280
240
200
160
120
80
40
1
2
3
4
5
6
GRADE

Figure 8.

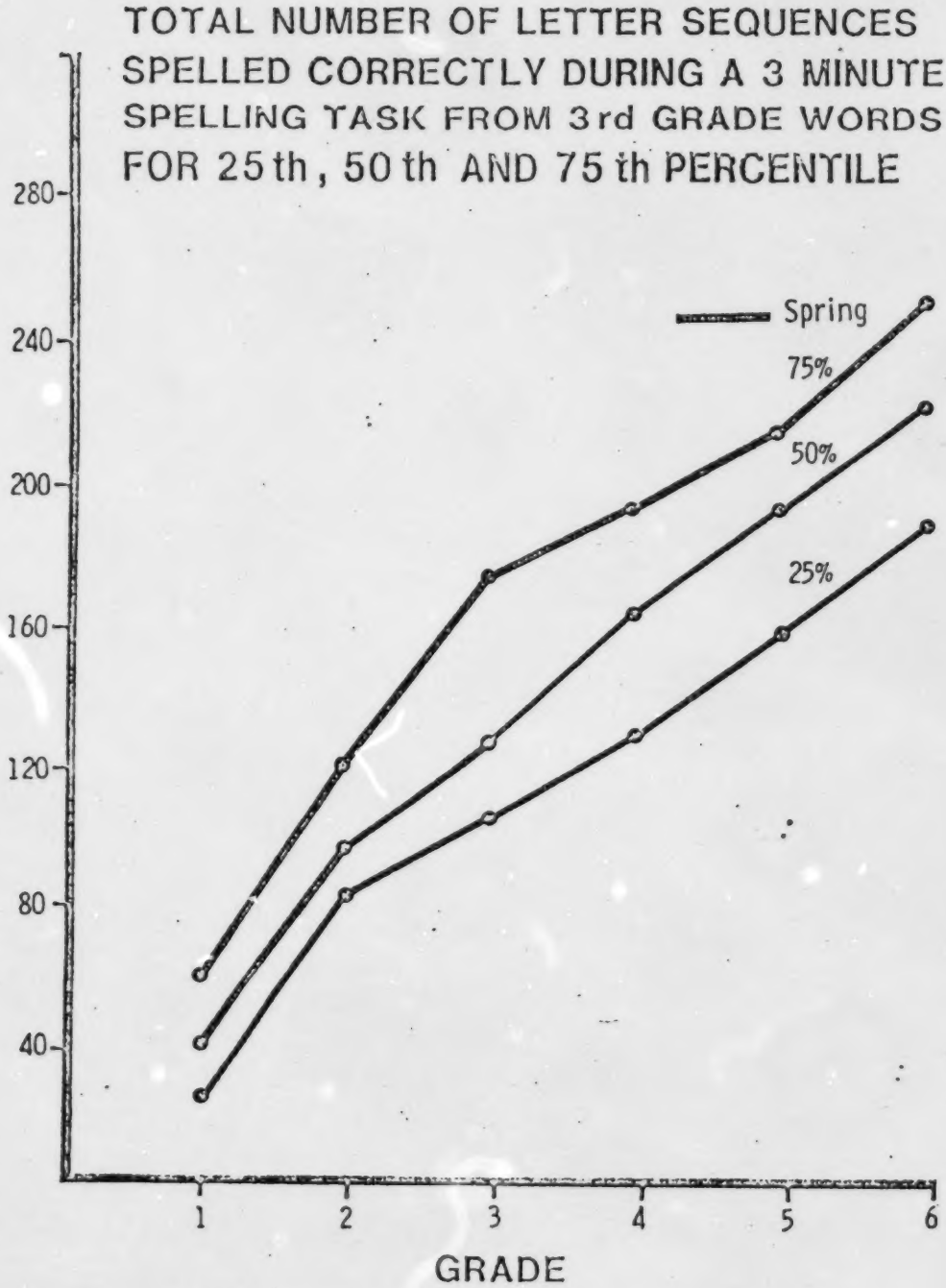

TOTAL NUMBER OF LETTER SEQUENCES SPELLED CORRECTLY DURING A 3 MINUTE SPELLING TASK FROM 3rd GRADE WORDS FOR 25th, 50th AND 75th PERCENTILE
280
240
200
160
120
80
40
Spring
75%
50%
25%
1
2
3
4
5
6
GRADE

Figure 9

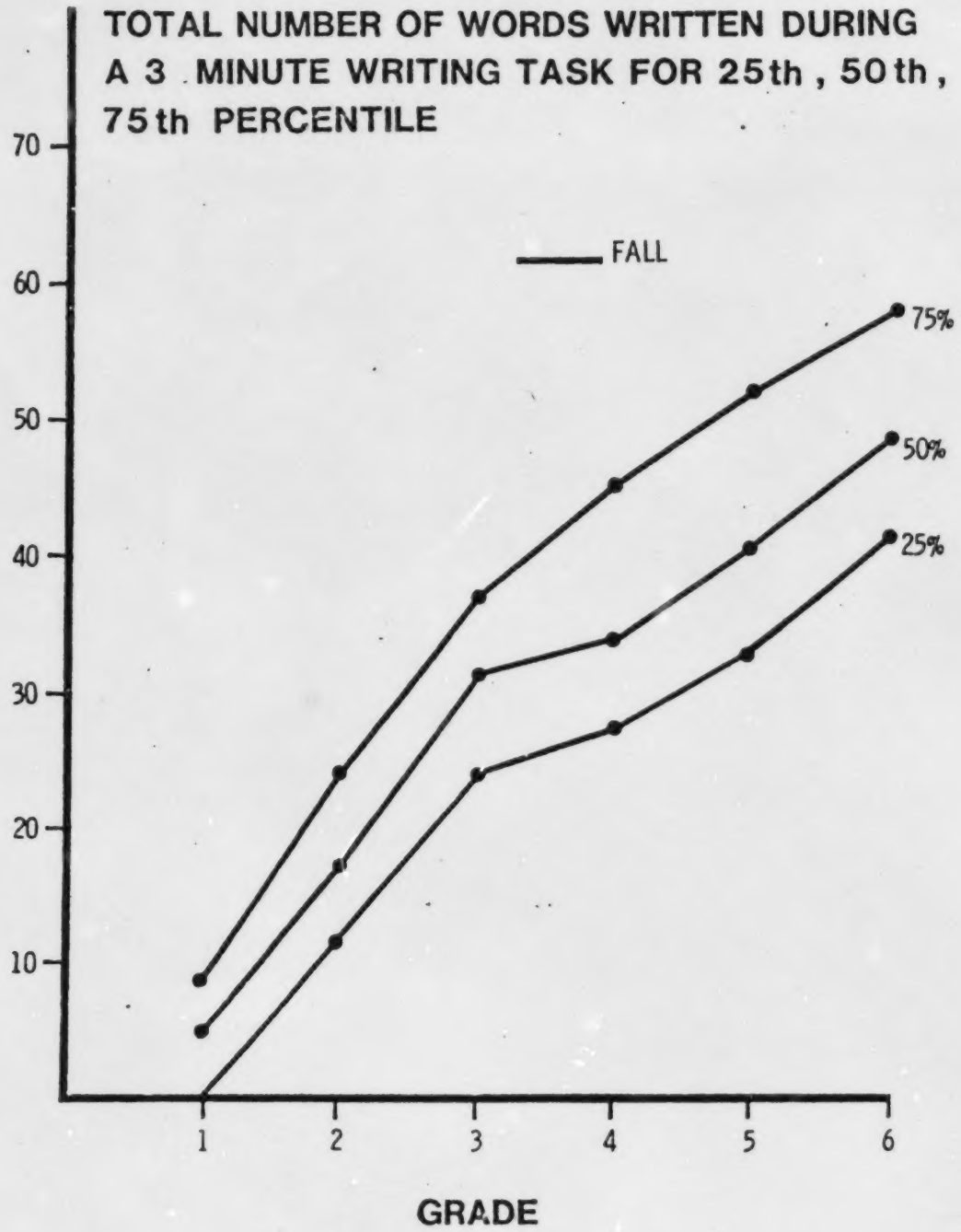

TOTAL NUMBER OF WORDS WRITTEN DURING A 3 MINUTE WRITING TASK FOR 25th, 50th, 75th PERCENTILE
70
60
50
40
30
20
10
FALL
75%
50%
25%
1
2
3
4
5
6
GRADE

Figure 10.

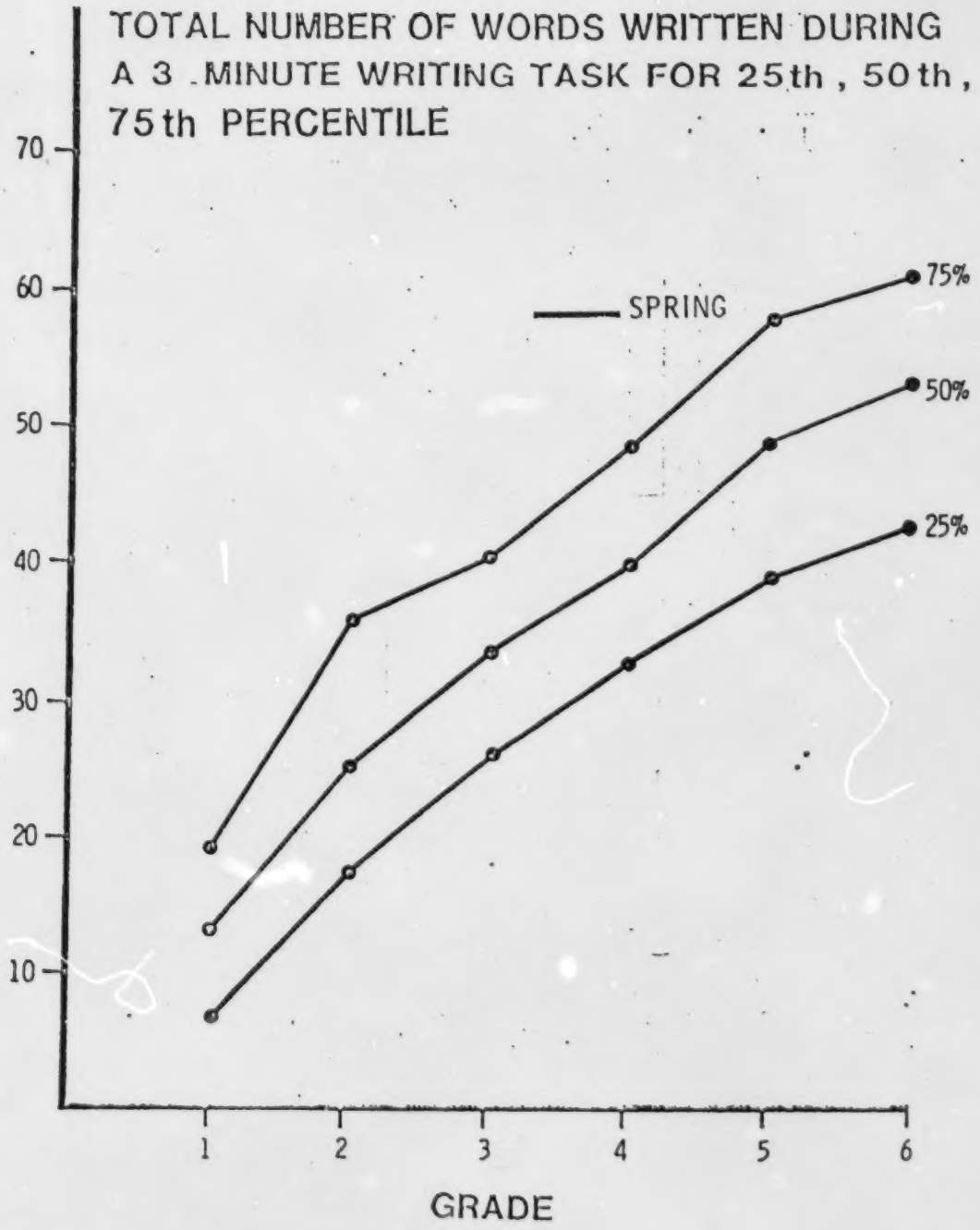

TOTAL NUMBER OF WORDS WRITTEN DURING A 3 MINUTE WRITING TASK FOR 25th, 50th, 75th PERCENTILE
70
60
50
40
30
20
10
SPRING
75%
50%
25%
1
2
3
4
5
6
GRADE

Figure 11.

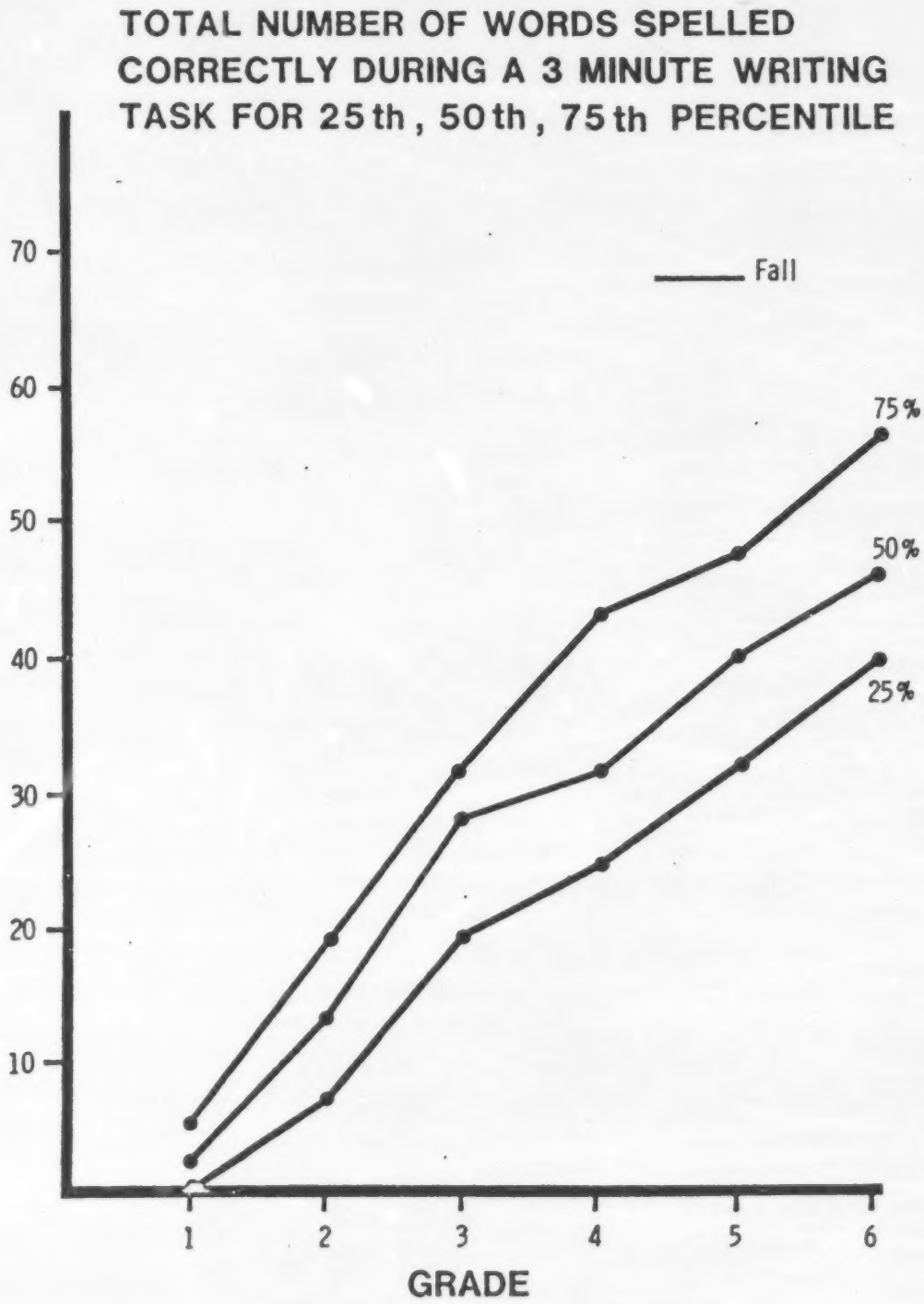

TOTAL NUMBER OF WORDS SPELLED CORRECTLY DURING A 3 MINUTE WRITING TASK FOR 25th, 50th, 75th PERCENTILE
Fall
75%
50%
25%
70
60
50
40
30
20
10
1
2
3
4
5
6
GRADE

Figure 12.

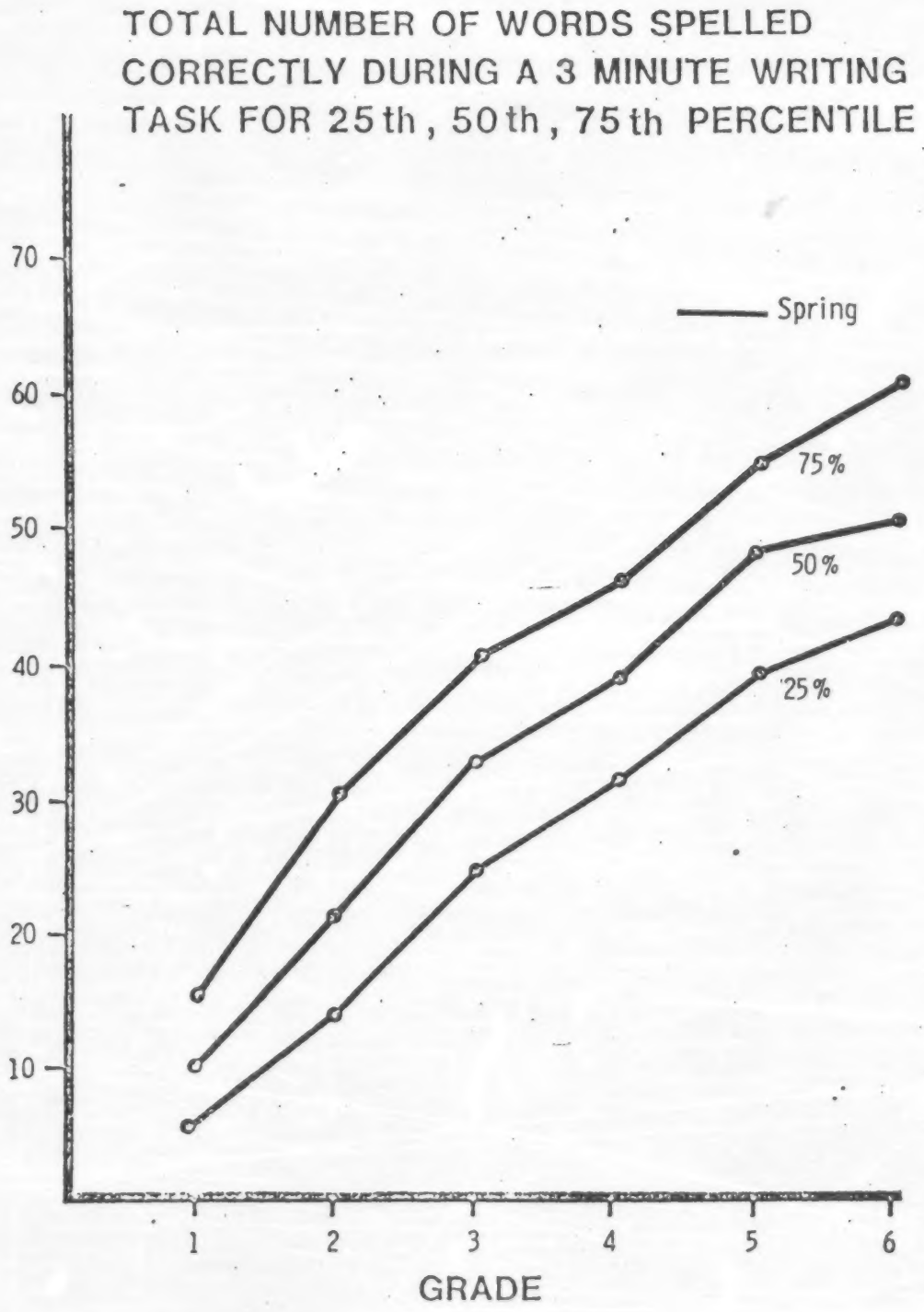

TOTAL NUMBER OF WORDS SPELLED CORRECTLY DURING A 3 MINUTE WRITING TASK FOR 25th, 50th, 75th PERCENTILE
70
60
50
40
30
20
10
Spring
75%
50%
25%
1
2
3
4
5
6
GRADE

Figure 13.

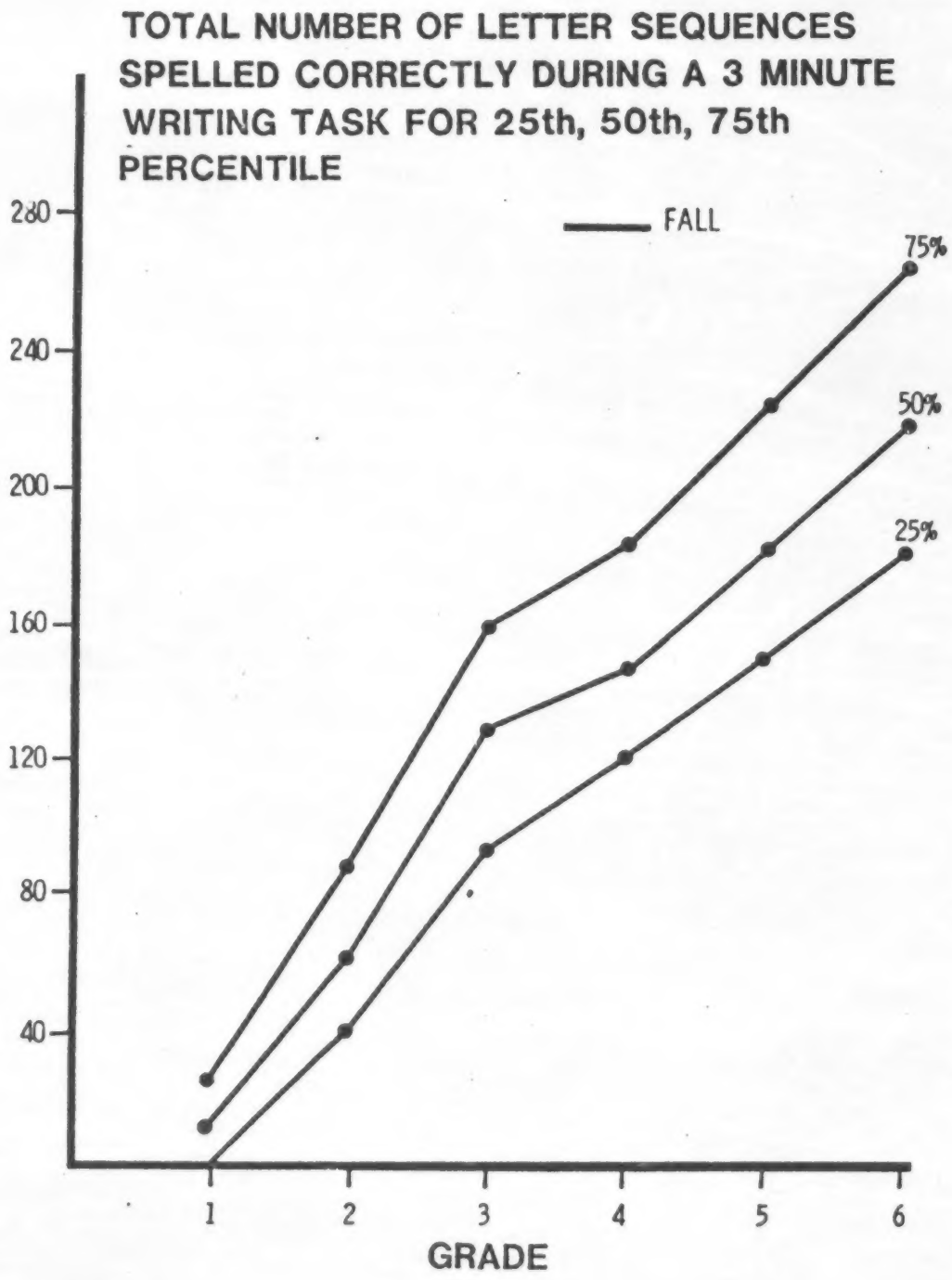
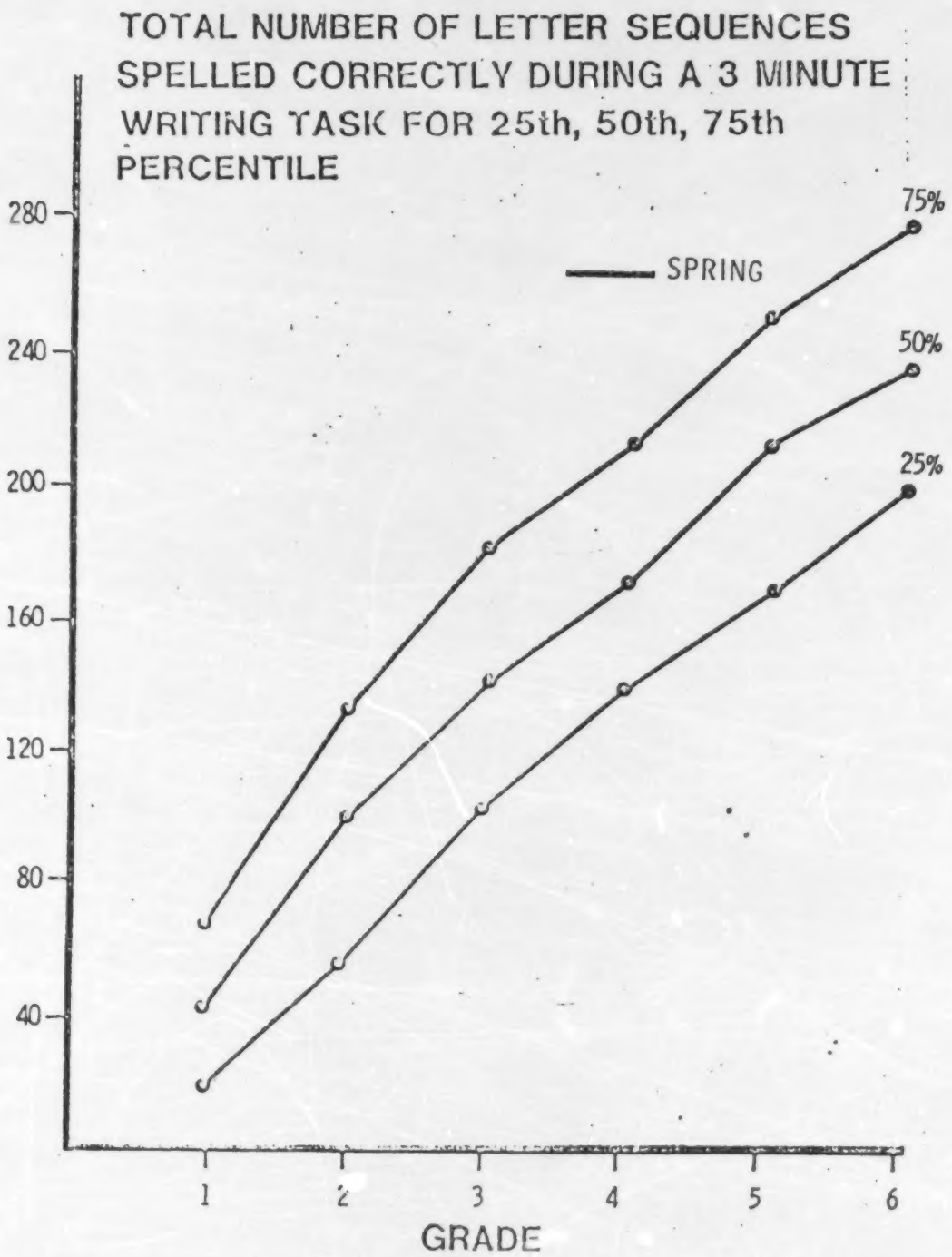

TOTAL NUMBER OF LETTER SEQUENCES SPELLED CORRECTLY DURING A 3 MINUTE WRITING TASK FOR 25th, 50th, 75th PERCENTILE
FALL
75%
50%
25%
280
240
200
160
120
80
40
1
2
3
4
5
6
GRADE

Figure 14.


TOTAL NUMBER OF LETTER SEQUENCES SPELLED CORRECTLY DURING A 3 MINUTE WRITING TASK FOR 25th, 50th, 75th PERCENTILE
280
240
200
160
120
80
40
75%
SPRING
50%
25%
1
2
3
4
5
6
GRADE

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Ysseldyke, J. E. Assessing the learning disabled youngster: The state of the art (Research Report No. 1). November, 1977.

Ysseldyke, J. E., & Regan, R. R. Nondiscriminatory assessment and decision making (Monograph No. 7). February, 1979.

Foster, G., Algozzine, B., & Ysseldyke, J. Susceptibility to stereotypic bias (Research Report No. 3). March, 1979.

Algozzine, B. An analysis of the disturbingness and acceptability of behaviors as a function of diagnostic label (Research Report No. 4). March, 1979.

Algozzine, B., & McGraw, K. Diagnostic testing in mathematics: An extension of the PIAT? (Research Report No. 5). March, 1979.

Deno, S. L. A direct observation approach to measuring classroom behavior: Procedures and application (Research Report No. 6). April, 1979.

Ysseldyke, J. E., & Mirkin, P. K. Proceedings of the Minnesota round-table conference on assessment of learning disabled children (Monograph No. 8). April, 1979.

Somwaru, J. P. A new approach to the assessment of learning disabilities (Monograph No. 9). April, 1979.

Algozzine, B., Forgnone, C., Mercer, C. D., & Trifiletti, J. J. Toward defining discrepancies for specific learning disabilities: An analysis and alternatives (Research Report No. 7). June, 1979.

Algozzine, B. The disturbing child: A validation report (Research Report No. 8). June, 1979.

Note: Monographs No. 1 - 6 and Research Report No. 2 are not available for distribution. These documents were part of the Institute's 1979-1980 continuation proposal, and/or are out of print.

Ysseldyke, J. E., Algozzine, B., Regan, R., & Potter, M. Technical adequacy of tests used by professionals in simulated decision making (Research Report No. 9). July, 1979.

Jenkins, J. R., Deno, S. L., & Mirkin, P. K. Measuring pupil progress toward the least restrictive environment (Monograph No. 10). August, 1979.

Mirkin, P. K., & Deno, S. L. Formative evaluation in the classroom: An approach to improving instruction (Research Report No. 10). August, 1979.

Thurlow, M. L., & Ysseldyke, J. E. Current assessment and decision-making practices in model programs for the learning disabled (Research Report No. 11). August, 1979.

Deno, S. L., Chiang, B., Tindal, G., & Blackburn, M. Experimental analysis of program components: An approach to research in CSDC's (Research Report No. 12). August, 1979.

Ysseldyke, J. E., Algozzine, B., Shinn, M., & McGue, M. Similarities and differences between underachievers and students labeled learning disabled: Identical twins with different mothers (Research Report No. 13). September, 1979.

Ysseldyke, J., & Algozzine, R. Perspectives on assessment of learning disabled students (Monograph No. 11). October, 1979.

Poland, S. F., Ysseldyke, J. E., Thurlow, M. L., & Mirkin, P. K. Current assessment and decision-making practices in school settings as reported by directors of special education (Research Report No. 14). November, 1979.

McGue, M., Shinn, M., & Ysseldyke, J. Validity of the Woodcock-Johnson psycho-educational battery with learning disabled students (Research Report No. 15). November, 1979.

Deno, S., Mirkin, P., & Shinn, M. Behavioral perspectives on the assessment of learning disabled children (Monograph No. 12). November, 1979.

Sutherland, J. H., Algozzine, B., Ysseldyke, J. E., & Young, S. What can I say after I say LD? (Research Report No. 16). December, 1979.

Deno, S. L., & Mirkin, P. K. Data-based IEP development: An approach to substantive compliance (Monograph No. 13). December, 1979.

Ysseldyke, J., Algozzine, B., Regan, R., & McGue, M. The influence of test scores and naturally-occurring pupil characteristics on psycho-educational decision making with children (Research Report No. 17). December, 1979.

Algozzine, B., & Ysseldyke, J. E. Decision makers' prediction of students' academic difficulties as a function of referral information (Research Report No. 18). December, 1979.

Ysseldyke, J. E., & Algozzine, B. Diagnostic classification decisions as a function of referral information (Research Report No. 19). January, 1980.

Deno, S. L., Mirkin, P. K., Chiang, B., & Lowry, L. Relationships among simple measures of reading and performance on standardized achievement tests (Research Report No. 20). January, 1980.

Deno, S. L., Mirkin, P. K., Lowry, L., & Kuehnle, K. Relationships among simple measures of spelling and performance on standardized achievement tests (Research Report No. 21). January, 1980.

Deno, S. L., Mirkin, P. K., & Marston, D. Relationships among simple measures of written expression and performance on standardized achievement tests (Research Report No. 22). January, 1980.

Mirkin, P. K., Deno, S. L., Tindal, G., & Kuehnle, K. Formative evaluation: Continued development of data utilization systems (Research Report No. 23). January, 1980.

Deno, S. L., Mirkin, P. K., Robinson, S., & Evans, P. Relationships among classroom observations of social adjustment and sociometric rating scales (Research Report No. 24). January, 1980.

Thurlow, M. L., & Ysseldyke, J. E. Factors influential on the psychoeducational decisions reached by teams of educators (Research Report No. 25). February, 1980.

Ysseldyke, J. E., & Algozzine, B. Diagnostic decision making in individuals susceptible to biasing information presented in the referral case folder (Research Report No. 26). March, 1980.

Thurlow, M. L., & Greener, J. W. Preliminary evidence on information considered useful in instructional planning (Research Report No. 27). March, 1980.

Ysseldyke, J. E., Regan, R. R., & Schwartz, S. Z. The use of technically adequate tests in psychoeducational decision making (Research Report No. 28). April, 1980.

Richey, L., Potter, M., & Ysseldyke, J. Teachers' expectations for the siblings of learning disabled and non-learning disabled students: A pilot study (Research Report No. 29). May, 1980.

Thurlow, M. L., & Ysseldyke, J. E. Instructional planning: Information collected by school psychologists vs. information considered useful by teachers (Research Report No. 30). June, 1980.

Algozzine, B., Webber, J., Campbell, M., Moore, S., & Gilliam, J. Classroom decision making as a function of diagnostic labels and perceived competence (Research Report No. 31). June, 1980.

Ysseldyke, J. E., Algozzine, B., Regan, R. R., Potter, M., Richey, L., & Thurlow, M. L. Psychoeducational assessment and decision making: A computer-simulated investigation (Research Report No. 32). July, 1980.

Ysseldyke, J. E., Algozzine, B., Regan, R. R., Potter, M., & Richey, L. Psychoeducational assessment and decision making: Individual case studies (Research Report No. 33). July, 1980.

Ysseldyke, J. E., Algozzine, B., Regan, R., Potter, M., & Richey, L. Technical supplement for computer-simulated investigations of the psychoeducational assessment and decision-making process (Research Report No. 34). July, 1980.

Algozzine, B., Stevens, L., Costello, C., Beattie, J., & Schmid, R. Classroom perspectives of LD and other special education teachers (Research Report No. 35). July, 1980.

Algozzine, B., Siders, J., Siders, J., & Beattie, J. Using assessment information to plan reading instructional programs: Error analysis and word attack skills (Monograph No. 14). July, 1980.

Ysseldyke, J., Shinn, M., & Epps, S. A comparison of the WISC-R and the Woodcock-Johnson Tests of Cognitive Ability (Research Report No. 36). July, 1980.

Algozzine, B., & Ysseldyke, J. E. An analysis of difference score reliabilities on three measures with a sample of low achieving youngsters (Research Report No. 37). August, 1980.

Shinn, M., Algozzine, B., Marston, D., & Ysseldyke, J. A theoretical analysis of the performance of learning disabled students on the Woodcock-Johnson Psycho-Educational Battery (Research Report No. 38). August, 1980.

Richey, L. S., Ysseldyke, J., Potter, M., Regan, R. R., & Greener, J. Teachers' attitudes and expectations for siblings of learning disabled children (Research Report No. 39). August, 1980.

Ysseldyke, J. E., Algozzine, B., & Thurlow, M. L. (Eds.). A naturalistic investigation of special education team meetings (Research Report No. 40). August, 1980.

Meyers, B., Meyers, J., & Deno, S. Formative evaluation and teacher decision making: A follow-up investigation (Research Report No. 41). September, 1980.

Fuchs, D., Garwick, D. R., Featherstone, N , & Fuchs, L. S. On the determinants and prediction of handicapped children's differential test performance with familiar and unfamiliar examiners (Research Report No. 42). September, 1980.

Algozzine, B., & Stoller, L. Effects of labels and competence on teachers' attributions for a student (Research Report No. 43). September, 1980.

Ysseldyke, J. E., & Thurlow, M. L. (Eds.). The special education assessment and decision-making process: Seven case studies (Research Report No. 44). September, 1980.

Ysseldyke, J. E., Algozzine, B., Potter, M., & Regan, R. A descriptive study of students enrolled in a program for the severely learning disabled (Research Report No. 45). September, 1980.

Marston, D. Analysis of subtest scatter on the tests of cognitive ability from the Woodcock-Johnson Psycho-Educational Battery (Research Report No. 46). October, 1980.

Algozzine, B., Ysseldyke, J. E., & Shinn, M. Identifying children with learning disabilities: When is a discrepancy severe? (Research Report No. 47). November, 1980.

Fuchs, L., Tindal, J., & Deno, S. Effects of varying item domain and sample duration on technical characteristics of daily measures in reading (Research Report No. 48). January, 1981.

Marston, D., Lowry, L., Deno, S., & Mirkin, P. An analysis of learning trends in simple measures of reading, spelling, and written expression: A longitudinal study (Research Report No. 49). January, 1981.

Marston, D., & Deno, S. The reliability of simple, direct measures of written expression (Research Report No. 50). January, 1981.

Epps, S., McGue, M., & Ysseldyke, J. E. Inter-judge agreement in classifying students as learning disabled (Research Report No. 51). February, 1981.

Epps, S., Ysseldyke, J. E., & McGue, M. Differentiating LD and non-LD students: "I know one when I see one" (Research Report No. 52). March, 1981.

Evans, P. R., & Peham, M. A. S. Testing and measurement in occupational therapy. A review of current practice with special emphasis on the Southern California Sensory Integration Tests (Monograph No. 15). April, 1981.

Fuchs, L., Wesson, C., Tindal, G., & Mirkin, P. Teacher efficiency in continuous evaluation of IEP goals (Research Report No. 53). June, 1981.

Fuchs, D., Featherstone, N., Garwick, D. R., & Fuchs, L. S. The importance of situational factors and task demands to handicapped children's test performance (Research Report No. 54). June, 1981.

Tindal, G., & Deno, S. L. Daily measurement of reading: Effects of varying the size of the item pool (Research Report No. 55). July, 1981.

Fuchs, L. S., & Deno, S. L. A comparison of teacher judgment, standardized tests, and curriculum-based approaches to reading placement (Research Report No. 56). August, 1981.

Fuchs, L., & Deno, S. The relationship between curriculum-based mastery measures and standardized achievement tests in reading (Research Report No. 57). August, 1981.

Christenson, S., Graden, J., Potter, M., & Ysseldyke, J. Current research on psychoeducational assessment and decision making: Implications for training and practice (Monograph No. 16). September, 1981.

Christenson, S., Ysseldyke, J., & Algozzine, B. Institutional constraints and external pressures influencing referral decisions (Research Report No. 58). October, 1981.

Fuchs, L., Fuchs, D., & Deno, S. Reliability and validity of curriculum-based informal reading inventories (Research Report No. 59). October, 1981.

Algozzine, B., Christenson, S., & Ysseldyke, J. Probabilities associated with the referral-to-placement process (Research Report No. 60). November, 1981.

Tindal, G., Fuchs, L. Christenson, S., Mirkin, P., & Deno, S. The relationship between student achievement and teacher assessment of short- or long-term goals (Research Report No. 61). November, 1981.

Mirkin, P., Fuchs, L., Tindal, G., Christenson, S., & Deno, S. The effect of IEP monitoring strategies on teacher behavior (Research Report No. 62). December, 1981.

Wesson, C., Mirkin, P., & Deno, S. Teachers' use of self instructional materials for learning procedures for developing and monitoring progress on IEP goals (Research Report No. 63). January, 1982.

Fuchs, L., Wesson, C., Tindal, G., Mirkin, P., & Deno, S. Instructional changes, student performance, and teacher preferences: The effects of specific measurement and evaluation procedures (Research Report No. 64). January, 1982.

Potter, M., & Mirkin, P. Instructional planning and implementation practices of elementary and secondary resource room teachers: Is there a difference? (Research Report No. 65). January, 1982.

Thurlow, M. L., & Ysseldyke, J. E. Teachers' beliefs about LD students (Research Report No. 66). January, 1982.

Graden, J., Thurlow, M. L., & Ysseldyke, J. E. Academic engaged time and its relationship to learning: A review of the literature (Monograph No. 17). January, 1982.

King, R., Wesson, C., & Deno, S. Direct and frequent measurement of student performance: Does it take too much time? (Research Report No. 67). February, 1982.

Greener, J. W., & Thurlow, M. L. Teacher opinions about professional education training programs (Research Report No. 68). March, 1982.

Algozzine, B., & Ysseldyke, J. Learning disabilities as a subset of school failure: The oversophistication of a concept (Research Report No. 69). March, 1982.

Fuchs, D., Zern, D. S., & Fuchs, L. S. A microanalysis of participant behavior in familiar and unfamiliar test conditions (Research Report No. 70). March, 1982.

Shinn, M. R., Ysseldyke, J., Deno, S., & Tindal, G. A comparison of psychometric and functional differences between students labeled learning disabled and low achieving (Research Report No. 71). March, 1982.

Thurlow, M. L. Graden, J., Greener, J. W., & Ysseldyke, J. E. Academic responding time for LD and non-LD students (Research Report No. 72). April, 1982.

Graden, J., Thurlow, M., & Ysseldyke, J. Instructional ecology and academic responding time for students at three levels of teacher-perceived behavioral competence (Research Report No. 73). April, 1982.

Algozzine, B., Ysseldyke, J., & Christenson, S. The influence of teachers' tolerances for specific kinds of behaviors on their ratings of a third grade student (Research Report No. 74). April, 1982.

Wesson, C., Deno, S., & Mirkin, P. Research on developing and monitoring progress on IEP goals: Current findings and implications for practice (Monograph No. 18). April, 1982.

Mirkin, P., Marston, D., & Deno, S. L. Direct and repeated measurement of academic skills: An alternative to traditional screening, referral, and identification of learning disabled students (Research Report No. 75). May, 1982.

Algozzine, B., Ysseldyke, J., Christenson, S., & Thurlow, M. Teachers' intervention choices for children exhibiting different behaviors in school (Research Report No. 76). June, 1982.

Tucker, J., Stevens, L. J., & Ysseldyke, J. E. Learning disabilities: The experts speak out (Research Report No. 77). June, 1982.

Thurlow, M. L., Ysseldyke, J. E., Graden, J., Greener, J. W., & Mecklenberg, C. Academic responding time for LD students receiving different levels of special education services (Research Report No. 78). June, 1982.

Graden, J. L., Thurlow, M. L., Ysseldyke, J. E., & Algozzine, B. Instructional ecology and academic responding time for students in different reading groups (Research Report No. 79). July, 1982.

Mirkin, P. K., & Potter, M. L. A survey of program planning and implementation practices of LD teachers (Research Report No. 80). July, 1982.

Fuchs, L. S., Fuchs, D., & Warren, L. M. Special education practice in evaluating student progress toward goals (Research Report No. 81). July, 1982.

Kuehnle, K., Deno, S. L., & Mirkin, P. K. Behavioral measurement of social adjustment: What behaviors? What setting? (Research Report No. 82). July, 1982.

Fuchs, D., Dailey, Ann Madsen, & Fuchs, L. S. Examiner familiarity and the relation between qualitative and quantitative indices of expressive language (Research Report No. 83). July, 1982.

Videen, J., Deno, S., & Marston, D. Correct word sequences: A valid indicator of proficiency in written expression (Research Report No. 84). July, 1982.

Potter, M. L. Application of a decision theory model to eligibility and classification decisions in special education (Research Report No. 85). July, 1982.

Greener, J. E., Thurlow, M. L., Graden, J. L., & Ysseldyke, J. E. The educational environment and students' responding times as a function of students' teacher-perceived academic competence (Research Report No. 86). August, 1982.

Deno, S., Marston, D., Mirkin, P., Lowry, L., Sindelar, P., & Jenkins, J. The use of standard tasks to measure achievement in reading, spelling, and written expression: A normative and developmental study (Research Report No. 87). August, 1982.